

Monitoring Data Record

Project Title: Cashiers (R-2224A) COE Action ID: 200230408
 Stream Name: unnamed tributary to the Thorpe Reservoir DWQ Number: 000536
 City, County and other Location Information: Sta. 136+00LT on NC 107 N of Cashiers
 Date Construction Completed: December 2003 Monitoring Year: (5) of 5
 Ecoregion: _____ 8 digit HUC unit 06010203
 USGS Quad Name and Coordinates: _____

Rosgen Classification: _____

Length of Project: 948' Urban or Rural: Urban Watershed Size: _____
 Monitoring DATA collected by: M. Green and J. Young Date: 8/14/08

Applicant Information:

Name: NCDOT Roadside Environmental Unit
 Address: 1425 Rock Quarry Rd. Raleigh, NC 27610
 Telephone Number: (919) 861-3772 Email address: mlgreen@dot.state.nc.us

Consultant Information:

Name: _____
 Address: _____
 Telephone Number: _____ Email address: _____

Project Status: Complete

Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.): Level 1 2 3

Monitoring Level 1 requires completion of *Section 1, Section 2 and Section 3*

Permit States: NCDOT shall perform the following components of Level I monitoring twice each year for the 5 year monitoring period (summer and winter): Reference photos, plant survival, and visual inspection of channel stability. If less than two bankfull events occur during the first 5 years, NCDOT shall continue monitoring until the second bankfull event is documented. The bankfull events must occur during separate monitoring years. In the event that the required bankfull events do not occur during the 5 year monitoring period, the USACE, in consultation with resource agencies, may determine that further monitoring is not required.

Section 1. PHOTO REFERENCE SITES

(Monitoring at all levels must complete this section)

Attach site map showing the location and angle of all reference photos with a site designation (name, number, letter, etc.) assigned to each reference photo location. Photos should be provided for all structures and cross section locations, should show both banks and include an upstream and downstream view. Photos taken to document physical stability should be taken in winter. Photos taken to document vegetation should be taken in summer (at representative locations). Attach photos and a description of each reference photo or location. We recommend the use of a photo identification board in each photo to identify location.

Total number of reference photo locations at this site: 4 reference points, 2 photos at each

Dates reference photos have been taken at this site: 5/20/04, 1/05/05, 5/31/05, 10/18/06, 2/27/07, 9/11/07, 2/12/08, 8/14/08

Individual from whom additional photos can be obtained (name, address, phone): _____

Other Information relative to site photo reference: A site map with photo point locations is attached to this report.

If required to complete Level 3 monitoring only stop here; otherwise, complete section 2.

Section 2. PLANT SURVIVAL

Attach plan sheet indicating reference photos.

Identify specific problem areas (missing, stressed, damaged or dead plantings):

Estimated causes, and proposed/required remedial action: Division forces planted an additional 35 trees along the stream relocation in late March and early April 2008. Species included red oak, white oak, and scarlet oak.

ADDITIONAL COMMENTS: Vegetation noted on site included willow oak, alder, scarlet oak, white oak, birch, black willow, dogwood, rhododendron, tulip poplar, northern red oak, white pine, chestnut oak, sycamore, green ash, red maple, woolgrass, lespedeza, *Juncus* sp., jewelweed, goldenrod, and various grasses. The supplemental plantings and transplants that the division forces have planted on site have helped to greatly improve the vegetation coverage.

If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

Section 3. CHANNEL STABILITY

Visual Inspection: The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

The stream relocation is stabilized for the Year 5 summer evaluation. NCDOT will continue to monitor this stream relocation.

Date Inspected	Station Number	Station Number	Station Number	Station Number	Station Number
Structure Type					
Is water piping through or around structure?					
Head cut or down cut present?					
Bank or scour erosion present?					
Other problems noted?					

NOTE: Attach separate narrative sheets to each monitoring report describing/discussing the overall monitoring results. Include the identification of specific problem areas/channel failures, estimated cause and proposed/required remedial action. This should include a brief discussion of any parameter that has changed significantly from as-built.

Cashiers Stream



Photo 1 (Upstream)



Photo 2 (Downstream)



Photo 3 (Upstream)



Photo 4 (Downstream)



Photo 5 (Upstream)



Photo 6 (Downstream)

Year 5 Summer – August 2008

Cashiers Stream



Photo 7 (Upstream)



Photo 8 (Downstream)

R-2224A Stream Cashier Photo Point Location

⊕ Photo Points

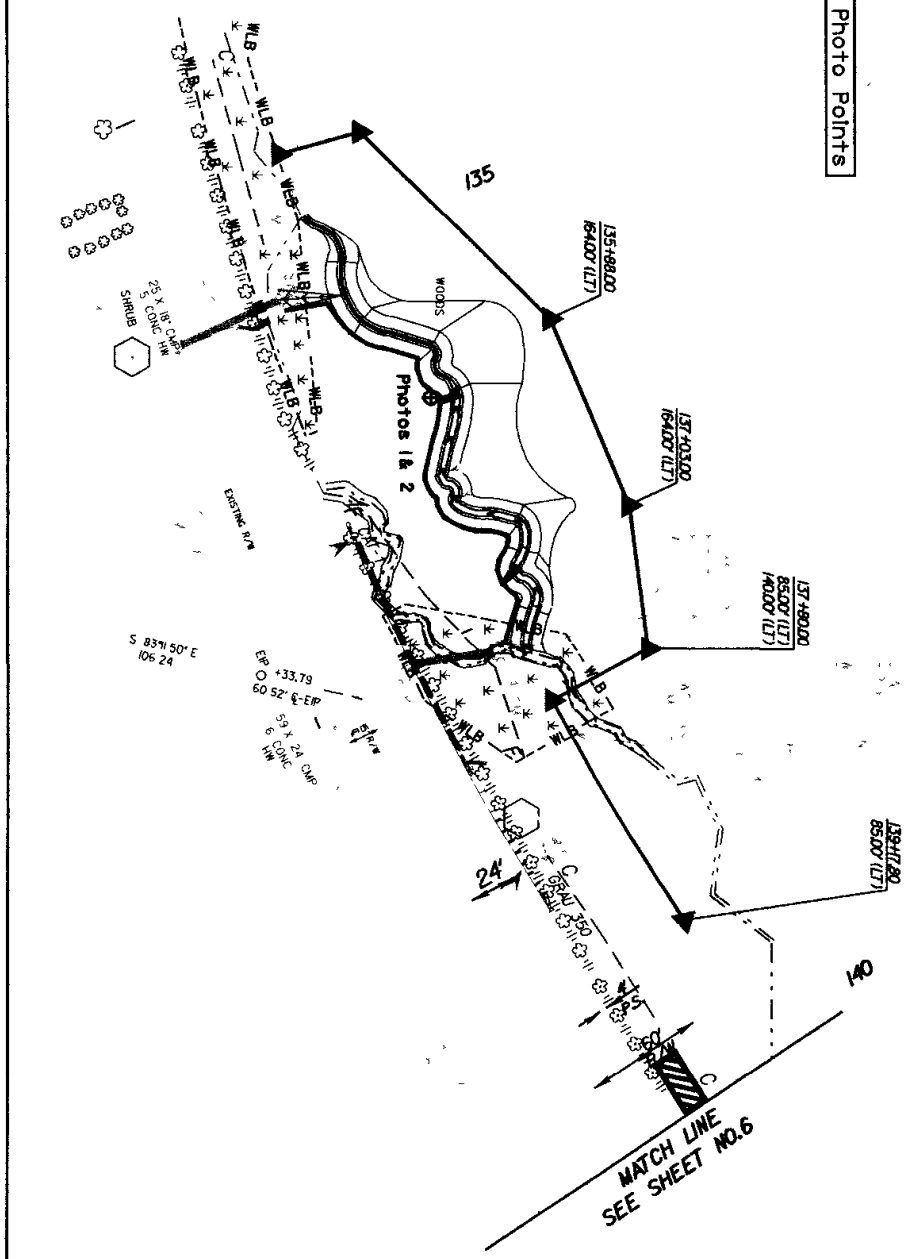


Photo Points

[illegible]